INSTITUTE OF ENERGY
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The role of gas in the new European energy environment and the importance of the East Mediterranean

IENE Working Paper No29

Athens, July 2020

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Introduction

The European Green Deal (EGD) featured prominently when the Commission President Ursula von der Leyen presented EU's €750billion Recovery Plan from the Covid-19 pandemic on 27 May. This is described in a document with the befitting title of "Europe's moment: Repair and Prepare for the Next Generation". The Plan will give priority to building renovation, renewables and hydrogen, as well as to clean mobility and waste management. It is aiming for a climate-neutral and digital EU future, but there is no direct reference to supporting natural gas.

This is on top of the EU's updated seven-year €1.1trillion budget, that will also be geared towards supporting the green and digital transitions.

The EC promised to roll-out renewable energy projects, especially wind and solar, needed to generate electricity to kick-start a clean hydrogen economy in Europe. Even though it is not clear how much of the funds will be earmarked for green initiatives, analysts estimate these at more than €100billion.

Von der Leyen summed up the opportunities the Plan offers: "The recovery plan turns the immense challenge we face into an opportunity, not only by supporting the recovery but also by investing in our future: the EGD Deal and digitalization will boost jobs and growth, the resilience of our societies and the health of our environment…We can now lay the cornerstone for a union which is climate neutral, digital and more resilient than ever before."

Is there a future for gas in the EU?

At first sight natural gas faces an uncertain future in EU's Recovery Plan. But a day after its presentation, Klaus Borchardt, deputy director-general European Commission (EC), categorically confirmed at an Atlantic Council webinar on European energy security that natural gas has a future in the EU, at least for the next ten years. However, at the European Gas Conference in Vienna in January, he also said Europe has all the gas it needs and does not need any more large import pipelines.

At the same Atlantic Council webinar, Ditte Juul-Jørgensen, EC director-general for energy, added that "the role of gas will be much smaller than it is today, but that's 2050. That's 30 years from now."

On top of that, the European Investment Bank (EIB) announced in November last year that it will stop funding fossil fuel projects, including natural gas, from the end

of 2021. It will also limit approvals of new fossil fuel projects before 2021 to projects that are already under appraisal by the EIB. A decision that could pose long-term challenges for the gas industry in Europe.

Another setback for gas is that EU member states agreed on 25 June that the 'Just Transition Fund', part of the EU Recovery Plan, will exclude support for natural gas. Borchardt's confirmation is reassuring for existing gas projects, allowing sufficient time to adjust during transition. But it is not enough for recently constructed projects or new gas projects that need a 20-year life to recover investments. And EIB's decision makes it that much harder. EC's policies for the longer-term future of gas in the EU need clarity.

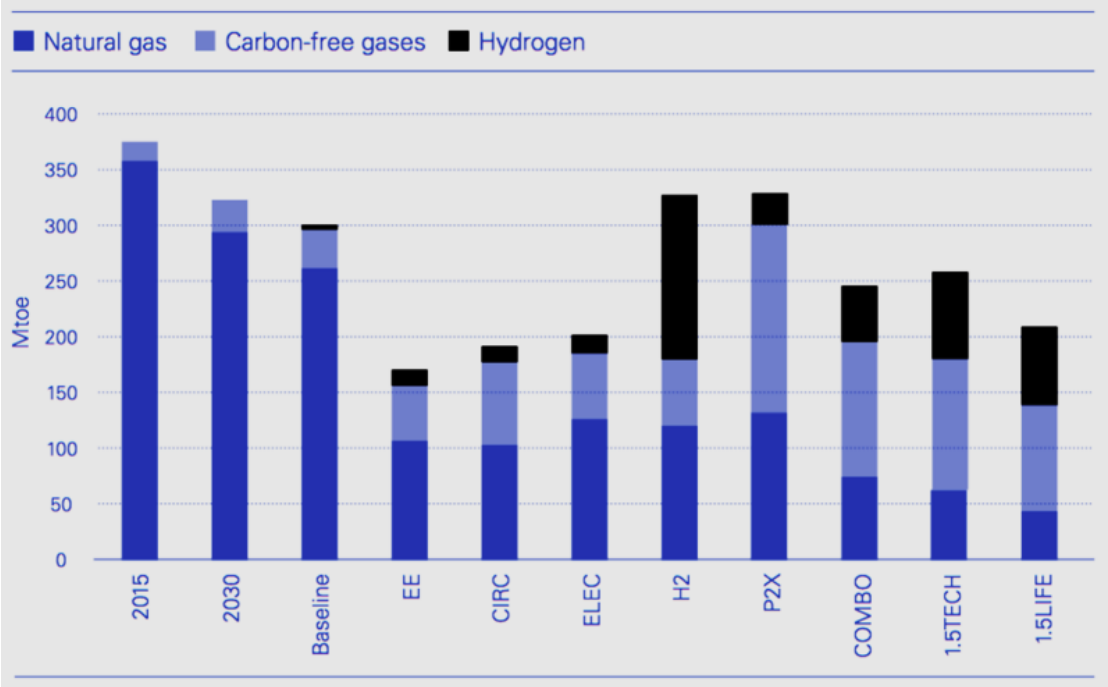
Natural gas provides about a quarter of EU's energy needs. Without further clarification and with the advent of the EGD, these uncertainties will deter construction of new projects to supply gas to Europe, eventually risking shortages of gas supplies. This could become especially problematic if effective transition to green energy takes longer than envisaged. In any case, gas is still essential for industrial sectors like steel, chemicals, aviation and heavy-duty transport that are too expensive or difficult to electrify. BP's Energy Outlook forecasts that Europe will still need almost the same amount of gas in 2040 as it was consuming in 2017.

This is what led eight EU member-states - Bulgaria, Czech Republic, Greece, Hungary, Lithuania, Poland, Romania and Slovakia - to defend the role of natural gas during transition towards climate neutrality. They called for "combined electricity-gas solutions" during transition to net-zero emissions by 2050. They fear that they may be left with stranded assets, but they also fear the massive investment required for renewables.

But environmental activists and NGOs reacted strongly, warning them over green-washing. They are urging the EC to stop any support to natural gas and related infrastructure.

The EC expects that electricity will meet 53% of EU's energy demand by 2050. That leaves over 40% for other energy carriers such as gaseous fuels that the EC says will have to be decarbonised in order to reach climate neutrality by 2050. EC scenario studies show the potential future role gases – natural gas, biogas and waste gas, synthetic methane and hydrogen - could play in the longer-term in EU's energy system (*Figure 1*). Clearly the role of natural gas is expected to diminish.

Figure 1: Gaseous fuels consumption in the EU to 2050



Source: NGW/European Commission

On the other hand, the International Energy Agency (IEA) forecasts that gas will retain a critical role in global primary energy to 2040, even if the EU goes in the opposite direction. The rest of the world sees it as a cheap, plentiful and lower-emission energy source, hastening the shift away from coal. Its share is expected to grow to about 25% in IEA's STEPS scenario, and to about 20% in SDS, by 2040.

But gas companies could benefit from EU's drive to shift to hydrogen use. Most hydrogen used today, about 76%, is produced from natural gas, with green hydrogen amounting to only 1% due to high costs. Further development of this technology, combined with carbon capture and storage (CCS), and further reductions in unit costs could extend the life of natural gas, and use of gas infrastructure, well into the future.

However, there are concerns that building hydrogen infrastructure will take time. Jonathan Stern, director Oxford Institute of Energy Studies, said at a EURACTIV webinar "I think this could take us a lot of time, just as it has taken us a lot of time for natural gas." He added that it took 30 years to build a functioning EU-wide market for natural gas.

In the meanwhile BP and other EU-based major companies are asking that the recovery is used as an opportunity to accelerate transition to net-zero. Given that EU

member-states are in the process of evaluating the Recovery Plan, there is still time – during the inevitable negotiations – to modify its details.

Global oil and gas

The major international oil and gas companies (IOCs) saw huge profit reductions at the end of the first-quarter of 2020. In fact ExxonMobil reported its first loss, $610million, in over 30 years and Shell cut its dividend by two-thirds, for the first time since WW2.

Since then, with Covid-19 in full swing, oil and gas markets deteriorated even further, plagued by a massive drop in demand and unprecedentedly low prices hitting the IOCs badly. The oil and gas industry is in crisis. Second-quarter results are expected to be even worse than the first.

These dire developments have forced the IOCs to cut spending in 2020 by between 20%-50% and more is expected next year. It is likely to take 2-3 years before normality returns. Between now and then the industry will undergo consolidation and restructuring.

Inevitably, IOCs will be investing their reduced budgets on core business and areas with high returns – not in frontier areas. This was the message from a webinar organized by the Oil & Gas Council on 25 June, with the title 'There is no future in frontier exploration,' with the argument from a financier that "we do not need any more oil an gas, we have plenty.' Despite the slump, a key priority for the IOCs is to safeguard profitability and maintain dividends, expected by their shareholders.

And while all this is happening, the pressure from environmentalists and renewables is increasing. While oil and gas experience a slump in demand due to the impact of the Covid-19 pandemic on the global economy, the IEA confirmed in its recent 'Global Energy Review' that renewables demand is increasing, putting even more pressure on a beleaguered sector.

Seeing the writing on wall, the European IOCs have embarked on programmes for a decarbonized future. With a long-term uncertainty over the future of oil and gas demand, and the resilience of the industry no longer assured, they are growing their green business. Eni is the latest to join the club, looking to eventually have less oil in its portfolio, by building its renewable capacity.

There is now a growing view that the reduction in oil demand is likely to endure beyond Covid-19. Bernard Looney, CEO BP, told the FT in May that the pandemic crisis is "adding to the challenges of oil in the years ahead", likely to usher-in "peak-oil" demand in the 2030s.

LNG market

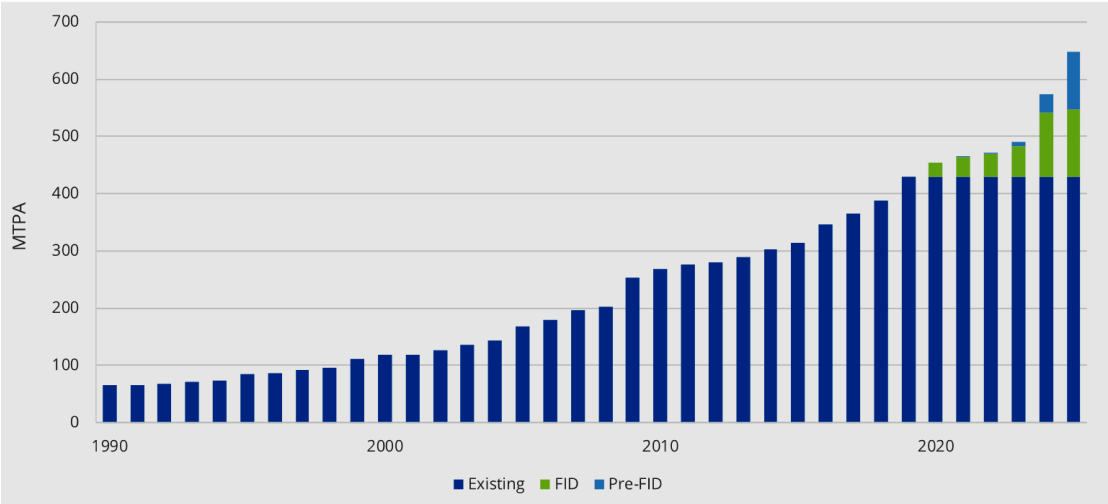
The global LNG market was in trouble before Covid-19 as a result of oversupply. The pandemic made it that much more difficult due to its impact on the global economy. In its Gas 2020 report, the IEA expects this to reduce global gas demand in 2020 by 4% - the first such reduction for a long time.

In addition, the rapid growth in LNG supplies over the past few years - with demand for LNG not responding in-tandem to enable a balanced market at an acceptable price to all – has been driving oversupply, resulting in the current ultra-low price environment (*Figure 3*).

The IEA forecasts in its Gas 2020 report that with more LNG coming into the market, and with global demand taking years to recover, there will be longer-term overcapacity and oversupply.

With new liquefaction projects currently in construction and record projects announcing FID in 2019, global LNG supplies will carry-on growing for the next five years (*Figure 2*). In addition, Qatar LNG has reconfirmed its plans to expand its liquefaction capacity by 30mtpa (million tonnes/annum) by 2025, with another 19mtpa to be added by 2027. This is the world's most cost-competitive source of LNG. As a result, something like 186mtpa new LNG capacity are likely to come into the market by 2027.

Figure 2: Global liquefaction capacity development to 2025



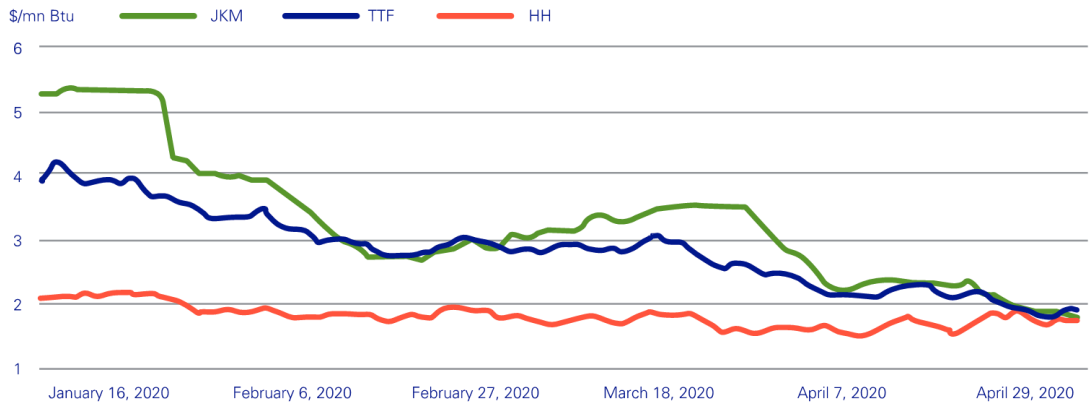
Source: IGU/Rystad Energy (Dec. 2019)

Following recovery from Covid-19, LNG demand will carry-on increasing in Asia. But with China giving priority to domestic energy resources, largely because of energy security concerns as a result of the worsening relationship with the US, its future

LNG demand growth is under question. Nevertheless, it is estimated that global demand may increase by 100-150mtpa by 2027. As a result, LNG oversupply may extend well into the 2020s keeping prices low.

With global LNG markets getting increasingly competitive, shorter-term contracts and spot deliveries will become more common over time. By May/June spot LNG prices in Europe, Asia and the US converged to around $2/mmbtu (million btu) (*Figure 3*). Even though these are expected to rise post-Covid-19, the looming oversupply means that prices will not reach levels that would make East Med gas competitive.

Figure 3: Global gas prices in 2020



Source: NGW/S&P Global

It is within this very challenging backdrop that the future of East Med gas must be viewed.

Impact on East Med

With such low prices, Asia might no longer be a market for East Med gas. And with the application of the EGD, the EU is becoming even more challenging for gas.

In the East Med, projects and drilling are struggling faced with the impact of the pandemic, an over-supplied gas market and much reduced IOC spending. Egypt's Idku LNG plant has been unable to sell LNG since March because of low prices and Zohr gas production is down one-third.

Commenting on this recently, Professor Jonathan Stern, founder of Oxford Institute for Energy Studies, and with first-hand knowledge of East Med, was blunt. He said "I was very dubious about East Med gas even at pre-2019 prices. Now forget it." He added that that by the time any new East Med gas would theoretically be ready to export to Europe, possibly only by the late 2020s, EU CO2 constraints would add

further costs and complexity. He advised "East Med resource holders need to concentrate on supplying to the region."Wise advice with which I fully concur. I have been saying as much in my articles, but it is reassuring to see this reconfirmed by such a renowned expert.

Cyprus's uncertain energy future

With the IOCs postponing drilling and activities in its EEZ into 2021 – should conditions allow it - Cyprus energy is entering an uncertain future. Many would like to think that with the Covid-19 pandemic over, normality will return next year, drilling will resume and Cyprus energy plans will get back on-track.

But with the global hydrocarbons industry in crisis, this is unlikely to happen. There is a huge oversupply of oil and gas - as a result of low demand partly due to the economic impact of Covid-19 - and prices are extremely low.

In addition, post-Covid-19 continuing exploration in Cyprus EEZ, considered to be a frontier area, may no longer be a priority for the IOCs. With the expectation that global gas markets will remain oversupplied and prices will stay low, this is exactly what may happen.

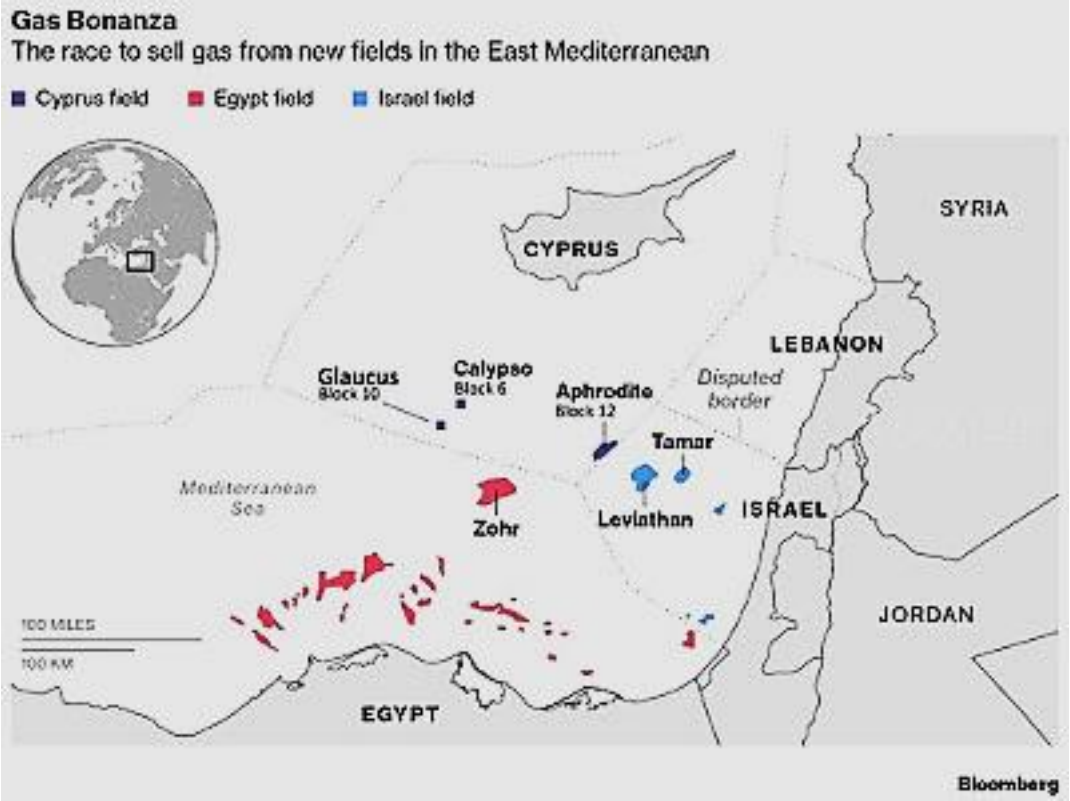
Moreover, with the development of already discovered gas-fields challenged by high costs and low gas prices, as a last resort, the IOCs may consider divestment. This would be a serous geopolitical, but also economic, blow to Cyprus. The riches expected to be made out of Cyprus' EEZ may never materialize.

This is also what renders Turkey's continued escalation of disputes and provocations in Cyprus EEZ futile and anachronistic. And so are statements that the route of East Med gas to markets is through Turkey. Given global markets and prices, this is not viable, even if it ever became politically possible.

Aphrodite in need of fresh thinking

As expected Noble Energy, the operator of Aphrodite, is putting development of the gas-field (*Figure 4*) - discovered in 2011 - on-hold. Noble confirmed this mid-June. It said that, while it remains true to its commitments in Cyprus, it is reconsidering the field's development plan in the light of difficult global markets.

Figure 4: Cyprus discovered gas-fields



Source: Bloomberg

Noble intends to enter into negotiations with the government to agree a new development timetable. But ominously, it indicated that this would depend on global market conditions, gas demand and prices. Coupled with David Stover's - CEO Noble Energy – statement on 8 May that "At Noble, we will not invest capital at less than acceptable returns, and we will preserve our resources for a better future," this is worrying.

Postponing development of the gas-field into the depths of time is not for the benefit of Cyprus. This means that Cyprus will be locked into importing LNG for a long time, and paying for it through high electricity prices, at a time when its own gas – three gas-fields with 350bcm (*Figure 4*) – remains unexploited, buried in the depths of the East Med.

How dependable is Noble

At the end of the first-quarter on 2020, Noble announced a net-loss of $4billion and 53% cuts in its 2020 spending. This was on top of losses during the past three years. Simply-Wall-Street states that with a loss of $1.5billion at the end of 2019 and a trailing-twelve-month loss of $5.2billion, analysts do not expect Noble to return to profitability until 2022. And even then, only if, on average, it grows 80% year-on-

year. But with low oil and gas prices expected to persist, this would be extremely challenging to achieve. Should the business grow at a slower rate, it will become profitable later than 2022.

Noble also has high debt, with its debt-to-equity ratio at 164%. Typically, debt shouldn't exceed 40% of equity, and the company has exceeded this considerably. The importance of this is that higher debt obligations pose a risk, but also limit the ability of the company to borrow and invest in new developments.

Simply-Wall-Street reports that at the end of March 2020 Noble had $8.47billion of debt, up from $6.56billion a year ago. With cash limited to $1.40billion, it had a net-debt of about $7.07billion. In addition, its liabilities totaled $10.3billion more than the combination of its cash and short-term receivables – not a healthy balance sheet.

Worryingly, about 50% of its updated capital expenditure amount was spent in the first-quarter, leaving only about $400million for the rest of 2020. It is likely that cuts in spending will be extended into 2021.

Noble's future is not necessarily being put into question by such figures, but its ability to invest is. These are not the healthy figures required to invest in a project of the size of Aphrodite.

But it is not only Noble that has limitations. Its partner Delek is facing real survival problems, to the point that it may be unable to continue as a going concern. The company is selling assets so that it can pay its massive debts. This may include Delek Israel. Another possibility is for Delek to put its Aphrodite share on sale to help it in its fight for survival.

And on top of this, the situation in Egypt does not help either. Egypt's Idku LNG plant has been unable to export LNG since March due to the prevailing, ultra-low, prices.

Noble's and Delek's problems, combined with Idku's inability to export its LNG, do not bode well for the future of Aphrodite. This may require new thinking and new investors. But if nothing changes, investors are unlikely to be forthcoming. They will need to be able to see a clear route to future gas sales. With global gas markets facing long-term oversupply and low prices, it leaves domestic and regional markets.

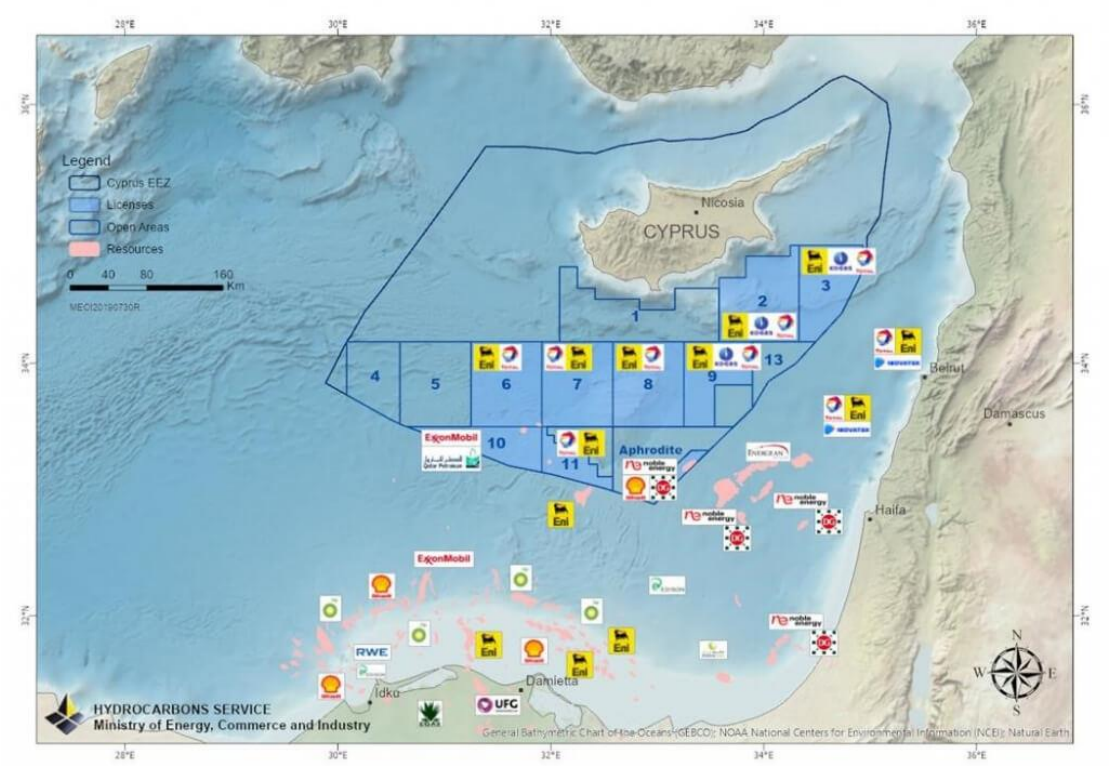
There are possibilities, but need facilitation and promotion by the government. But sadly Cyprus is going in the opposite direction. With the sanctioning of the LNG import project, Cyprus has been locked in long-term commitments that push development of Aphrodite even further away.

And with Europe going increasingly green, through the EGD, and with EU carbon emission targets being raised to levels attainable only through the adoption of renewables at the expense of gas, the future is challenging.

Impact on the rest of Cyprus' EEZ

It is not only development of Aphrodite that faces challenges, but the resumption of exploration and drilling in the rest of Cyprus' EEZ (*Figure 5*) is also becoming increasingly challenging.

Figure 5: Licensed blocks in Cyprus' EEZ



Source: Cyprus Ministry of Energy

ExxonMobil's first-quarter results were very disappointing, reflecting the crisis being faced by the global hydrocarbons industry. According to S&P Global, it has now lost its top spot among the IOCs to Shell.

All companies in Cyprus EEZ, including Shell, Total, Eni and Noble, had disappointing first quarter results and have all announced major spending cuts. They are also restructuring and divesting of non-core assets, taking actions to safeguard their balance sheets.

The failure to make a discovery in Lebanon, after all the hype, will weigh heavily in Eni/Total's plans in the region. It is possible that they will eventually return to complete appraisal drilling of Calypso. With gas quantities expected to be around

3tcf, a possible development path may involve a subsea tie-in to the Zohr gas-field, for onward export to Egypt, should this prove to be viable. But continuing with further, costly, exploration drilling in Cyprus EEZ is another matter. It remains to be seen whether this would fit into Eni/Total's post-crisis plans.

With the IEA forecasting persistent longer-term gas and LNG overcapacity and oversupply, low prices are likely to persist for the rest of the decade, making it very difficult for expensive East Med gas to secure sales in global markets. In such an environment, Cyprus' EEZ may not be crucial to the future plans of the IOCs and will not get priority. Delays are very likely to extend beyond 2021 and probably longer.

Cyprus needs a revised post-Covid-19 energy strategy

The alternative option of exporting East Med and Cyprus gas to Europe through the EastMed gas pipeline, on-and-off in the news, is equally challenged for the same reasons as before. Even though the required gas supplies are available, it still needs to secure gas sales contracts in Europe. With gas demand in Europe expected to be declining as we approach 2030, due to the impact of the EGD, and prices staying low, competition from plentiful and much cheaper gas makes such a project highly challenging.

The Covid-19 pandemic will leave the island in a very difficult economic situation for years to come. On top of it, with Aphrodite gas inaccessible, Cyprus is embarking on a costly project to import LNG. It is galling for Cypriot people and industry to have such an asset remaining unused – as is its vast solar power potential - while they are being asked to continue paying high electricity prices for years to come, without any hope for change.

Cyprus urgently needs a revised, post-Covid-19, energy strategy. Existing plans have been completely overtaken by irreversible global events beyond its control. The future lies in maximizing domestic and regional market options.